

Claims

1. Transmission, in particular an automatic transmission, with several shift control elements (A, B, C, D, E; F, G, H, I, K, L, M) and several gearwheels (2,3; 28 to 33) which can be engaged by means of the shift control elements to form a power flow, such that to establish a transmission ratio in each case at least one of the shift control elements (A to E; F, G, H, I, K, L, M) is closed, characterized in that the shift control elements (B, C, E; F, G, H, K), which are engaged for an up-shift, are formed as frictional shift control elements, and the shift control elements (A, D; L, M), which during up-shifts each constitute only a shift control element to be disengaged, are made as positive-locking shift control elements.

2. Transmission according to claim 1, characterized in that at least one planetary gearwheel assembly (2, 3) and/or at least one spur gear stage (28 to 33) is provided.

3. Transmission according to claims 1 or 2, characterized in that up-shifts can be carried out as changes-under-load.

4. Transmission according to any of claims 1 to 3, characterized in that a torque can be transmitted in both rotation directions by a closed, positive-locking shift control element (A, D; L, M).

5. Transmission according to any of claims 1 to 4, characterized in that at least one of the positive-locking shift control elements (A and D; L and M) is made as a claw coupling.

6. Transmission according to any of claims 1 to 5, characterized in that at least one of the positive-locking shift control elements (A and D; L and M) is made as a synchromesh device.

7. Transmission according to any of claims 1 to 6, characterized in that the positive-locking shift control elements (A and D; L and M) can be actuated mechanically or hydraulically.

8. Transmission according to any of claims 1 to 7, characterized in that at least one of the shift control elements (C, D) is made as a brake.

9. Transmission according to any of claims 1 to 8, characterized in that at least one multiple-shaft planetary transmission (2, 3) is provided, at which a power branching or a power summation takes place, so that a defined transmission ratio can be established.

10. Transmission according to claim 9, characterized in that the planetary transmission (3) is formed as a dual planetary gearwheel assembly.

11. Transmission according to any of claims 1 to 10, characterized in that the shift control elements (B, C, E; F, G, H, I, K) which are engaged during a traction up-shift and are disengaged during a traction down-shift, are formed as frictional shift control elements.

12. Transmission according to any of claims 1 to 11, characterized in that at least one of the frictional shift control elements is provided as a starting element.